

What we claim is:

1. A voice data communication system comprising:
 - a switchboard for switching lines;
 - a network;
- 5 interworking units for interworking a protocol on the network with a protocol for a line switching; and
- 10 IP extension terminals connected to the interworking units through the network;
- 15 the switchboard having a recognition unit for recognizing a communication to be made between the interworking units, and a notification unit for notifying the communication to the interworking units when the communication is recognized, and
- 20 each of the interworking units, provided corresponding to each of the IP extension terminals, having a relay route establishing unit for establishing a relay route to the interworking unit according to a notification from the switchboard, and a route establishing unit for establishing a voice data packet route to a route between the IP extension terminals through the network by using the relay route in response to a route establishment request from the IP extension terminals accommodated.
- 25 2. The voice data communication system as claimed in claim 1 wherein when a hooking operation is performed in any of the IP extension terminals, the recognition unit of the switchboard recognizes the hooking operation through the interworking unit, and the notification unit notifies the hooking operation to the voice data packet route establishing units of the interworking units, whereby the voice data packet route establishing units disconnect the relay route and establish a new voice data packet route between the IP extension terminals respectively accommodated in the voice data packet route establishing units.
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3. A voice data communication system comprising:
 - a switchboard for switching lines;
 - a network;
 - interworking units for interworking a protocol on the network
- 5 with a protocol for a line switching; and
 - IP extension terminals connected to the interworking units through the network;
 - the switchboard having a recognition unit for recognizing a communication to be made between the interworking units, and an notification unit for notifying the communication to the interworking units when the communication is recognized, and
 - 10 each of the interworking units having a route establishing unit for establishing a voice data packet route to a route between the IP extension terminals through the network according to a route establishment request from the IP extension terminal accommodated when the notification from the switchboard is received.
- 15 4. The voice data communication system as claimed in any one of claims 1 to 3 wherein the recognition unit recognizes the communication between the interworking units by predetermined data preliminarily registered and data determined at a time of a session initialization.
- 20 5. The voice data communication system as claimed in any one of claims 1 to 4 wherein the route establishment request includes an ability information setting message.
- 25 6. The voice data communication system as claimed in any one of claims 1 to 5 wherein the interworking unit comprises a gateway.
7. The voice data communication system as claimed in any one of claims 1 to 6 wherein the network comprises a LAN or a WAN.